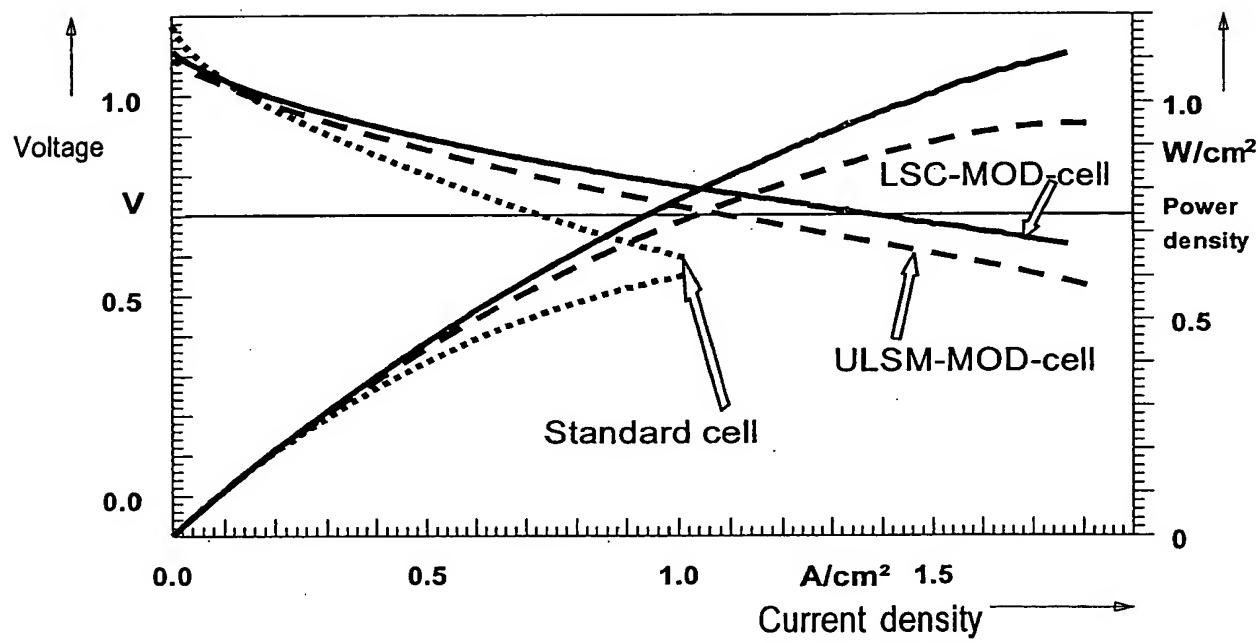


**Figure 1:** Schematic representation of a standard cell (left) and a cell (right) with modified cathode/electrolyte interface.



**Standard cell:**

ULSM 30 $\mu$ m|8YSZ 200 $\mu$ m|Ni/8YSZ 50 $\mu$ m

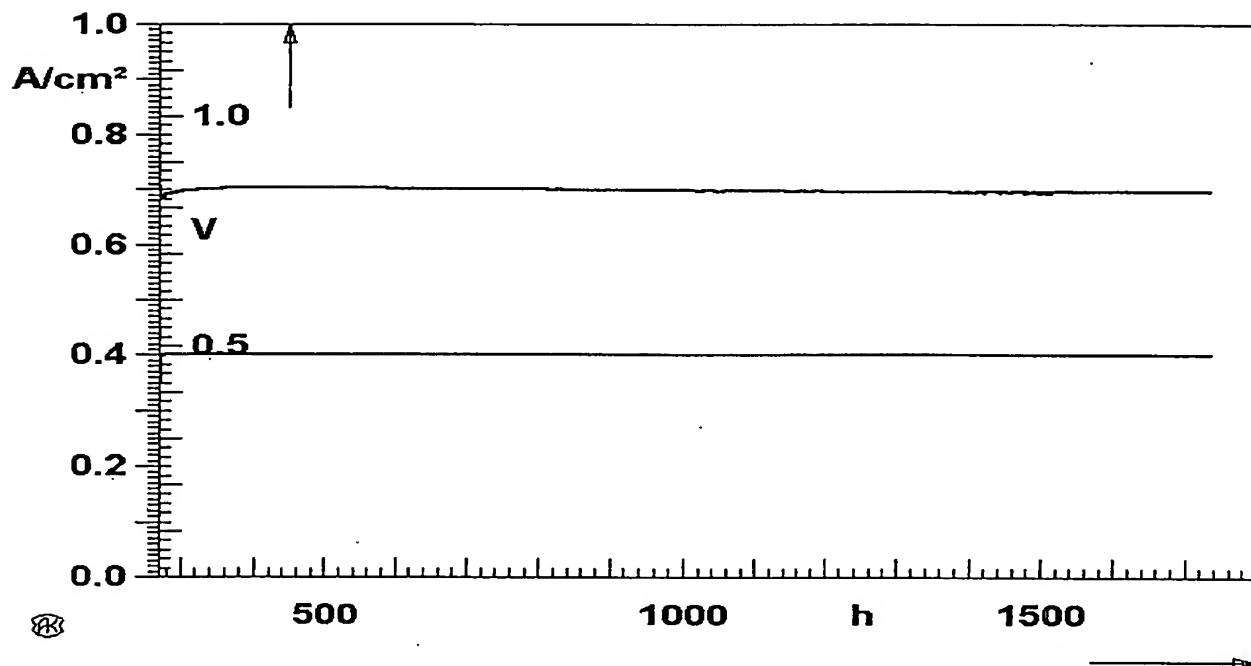
**ULSM-MOD-Cell:**

ULSM 30 $\mu$ m|ULSM-MOD 80nm|10YSZ particles|  
8YSZ-Electrolyte 200 $\mu$ m|Ni/8YSZ 50 $\mu$ m

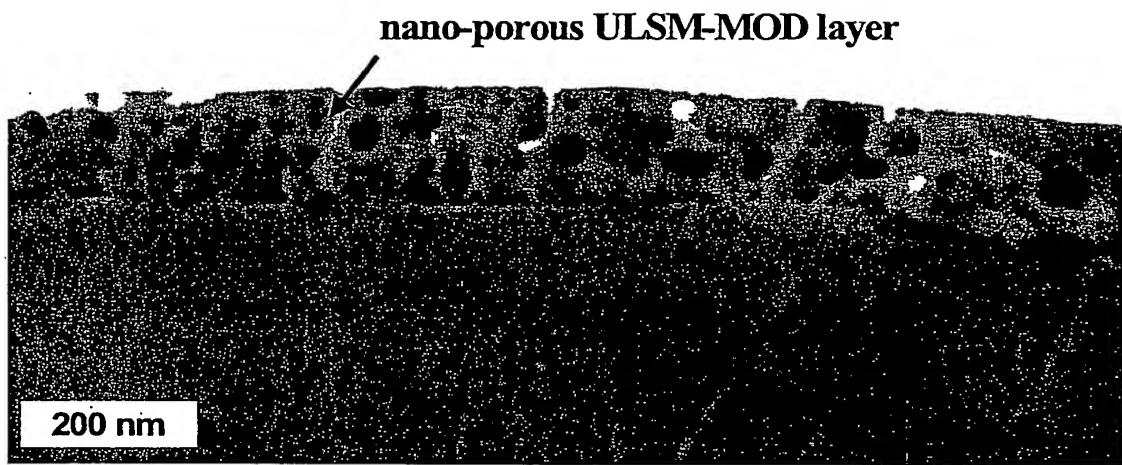
**LSC-MOD-Cell:**

ULSM 30 $\mu$ m|LSC-MOD 100nm|8YSZ particles|  
8YSZ-Electrolyte 200 $\mu$ m|Ni/8YSZ 50 $\mu$ m

**Figure 2:** I/V Characteristic of single cells with different cathodes at 950°C.



**Figure 3:** Long-term operation of a single cell with modified ULSM-MOD cathode over 1800 h at 950°C (degradation rate: 4 mV/1000h).



**Figure 4:** REM image of a nano-porous ULSM-MOD layer on a non-structured 8YSZ electrolyte.